
BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Chairman, Board Of Governors Of The Federal Reserve System

International Banking Facilities Have Improved The Competitive Position Of Banks In The United States

Econometric and other analyses show that the Federal Reserve Board's objective in authorizing International Banking Facilities was achieved. Their establishment in December 1981 resulted in substantial improvement in the U.S. competitive position in international banking. They permit banks in the United States to conduct deposit and loan transactions with foreign residents without being subject to reserve requirements and other regulations.





UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

B-214257

The Honorable Paul A. Volcker
Chairman, Board of Governors
of the Federal Reserve System

Dear Mr. Volcker:

This report examines the impact of International Banking Facilities (IBFs) on the competitive position of banks in the United States in international banking and several other effects of IBFs.

We found that IBFs achieved the objective set out for them by the Board. They substantially improved the competitive position of banks in the United States in international banking. Therefore, we make no recommendations.

Sincerely yours,

A handwritten signature in dark ink, reading "Frank C. Conahan". The signature is written in a cursive style with a large, stylized "F" and "C".

Frank C. Conahan
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE CHAIRMAN,
BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

INTERNATIONAL BANKING
FACILITIES HAVE IMPROVED THE
COMPETITIVE POSITION OF
BANKS IN THE UNITED STATES

D I G E S T

Since December 1981, the Federal Reserve Board has permitted banks in the United States to establish international banking facilities (IBFs). An IBF essentially is a segregated account on the books of a bank in the United States through which it may conduct a deposit and loan business with foreign residents without being subject to reserve requirements and some other regulations. These requirements had placed U.S. banks at a competitive disadvantage relative to the Euro-dollar market.

The Federal Reserve's objective in permitting IBFs was to enhance the competitiveness of banks in the United States in international banking. The creation of IBFs removed the last major obstacle to the competitiveness of banks in the United States with the Eurodollar market.

Some IBF proponents also claimed that such facilities would have a favorable impact on U.S. employment and associated benefits. The Federal Reserve staff, however, maintained that there would not be any significant impact because IBFs were likely to attract mostly business from off-shore shell branches, whose business was already mainly conducted in the United States. (See pp. 9-10.)

GAO undertook this study because of conflicting assessments as to potential impacts of IBFs. GAO assessed whether the Federal Reserve's objective and other projected benefits (e.g., increases in employment) were realized through establishment of IBFs.

IMPACT ON INTERNATIONAL
COMPETITIVE POSITION

The U.S. competitive position in international banking has substantially improved since the advent of IBFs. Dollar loans and other dollar-denominated claims on foreigners which are held as assets by U. S. banks and offices of foreign banks operating in the United States increased 77 percent from \$209.9 billion in September 1981 to \$372.4 billion in June 1983. During the

same period, comparable assets held by banks outside the United States increased by only 6 percent from \$782.9 billion to \$830.2 billion. For ease of analysis, we measure competitiveness as the ratio of foreign dollar assets of banks in the United States to foreign dollar assets of banks elsewhere. This ratio rose from 0.27 in September 1981 to 0.45 in June 1983, a 67 percent increase. Econometric and other analyses indicated that this gain is attributable to IBFs. This result holds even when accounting for locational preference; i.e., preference for the United States as a "safe haven" did not play a role in the increase in the U.S. competitive position. Thus, GAO's analysis indicates that the Federal Reserve's objective in establishing IBFs was achieved. (See pp. 14-17.)

To prevent weakening of its ability to conduct monetary policy, the Federal Reserve adopted several restrictions on IBF activities. They include a minimum 2-day maturity for nonbank deposits and a requirement that nonbank borrowers assure that they will not use IBF proceeds within the United States. (See p. 13.)

The remarkable expansion of the U.S. competitive position in international banking, as well as GAO interviews with bankers, shows that the restrictions placed on IBFs by the Federal Reserve have not restrained the growth of international banking in the United States.

OTHER IMPACTS

GAO also assessed other impacts of IBFs. This assessment indicates that:

- IBFs probably prevented or mitigated declines in employment and associated benefits in the United States that might have occurred during this period of international debt crisis. (See pp. 18-20.)
- The establishment of IBFs does not appear to have affected the share of U.S. chartered banks, on a consolidated worldwide basis (i.e., including their overseas offices), of total international banking. It has remained at about 30 percent. (See p. 17.)
- IBFs have not affected the worldwide volume of international banking. (See p. 20.)

AGENCY COMMENTS

The Board of Governors of the Federal Reserve System did not comment on the report because it contains no recommendations. However, Federal Reserve staff commented that GAO analysis generally confirmed their own.

C o n t e n t s

		<u>Page</u>
DIGEST		i
CHAPTER		
1	INTRODUCTION	1
	Objectives, scope, and methodology	2
2	ESTABLISHMENT AND DEVELOPMENT OF THE EUROCURRENCY MARKET	3
	Emergence and early development	3
	Evolution of the market in the 1970s and early 1980s	6
	Halt in decline in U.S. competitiveness	6
3	ESTABLISHMENT AND DEVELOPMENT OF INTERNATIONAL BANKING FACILITIES	8
	Preliminary proposals	8
	First New York Clearing House	8
	Association proposal	8
	Public comment on the proposal	9
	Federal Reserve review	10
	Second IBF proposal	11
	Public comment	11
	Federal Reserve review	12
	Board authorization of IBFs	12
	Exemption from Federal Deposit Insurance Corporation assessments	13
4	IMPACT OF INTERNATIONAL BANKING FACILITIES	14
	Impact on competitiveness in international banking	14
	Impact on global position of U.S. chartered banks	17
	Impact on U.S. employment and associated benefits	18
	Impact on global international banking	20
	Agency comments	20
APPENDIX		
I	Model used to assess the impact of IBFs on the share of banks in the United States in international banking	21
II	Model used to assess the impact of IBFs on global international banking	27
III	Federal Reserve comments	29

ILLUSTRATIONS

Ratio of foreign dollar assets of banks in the United States to those of banks elsewhere	15
U.S.-chartered banks' share on a consoli- dated worldwide basis of total inter- national banking assets	18

ABBREVIATIONS

BIS	Bank for International Settlements
FDIC	Federal Deposit Insurance Corporation
IBF	International Banking Facility

CHAPTER 1

INTRODUCTION

Since December 3, 1981 the Federal Reserve has permitted banks in the United States (U.S. offices of both U.S.-chartered banks and foreign banks) to establish international banking facilities (IBFs). An IBF essentially is a segregated account on the books of a bank in the United States through which a deposit and loan business with foreign residents may be conducted without being subject to reserve requirements, insurance coverage and assessments, and interest rate ceilings.

IBFs may be established by U.S.-chartered banks, including Edge Act Corporations¹, and agencies and branches of foreign banks located in the United States. No formal application is required; a bank need only notify the Federal Reserve Bank for the district in which the IBF is to be located at least 2 weeks in advance of establishment and agree to Federal Reserve IBF regulations, including accounting records and reporting requirements.

By the end of August 1983, U.S.-chartered banks had 142 IBFs, Edge Act Corporations had 69, and agencies and branches of foreign banks had 260, for a total of 471. IBF assets increased rapidly through August 1982; since then growth has continued but at a slackened pace.² By the end of August 1983, IBF assets totaled about \$200 billion. IBFs of agencies and branches of foreign banks accounted for more than half of this total. IBFs accounted for nearly all of the growth of foreign dollar assets held by these banks between the end of the third quarter of 1981, the quarter preceding the establishment of IBFs, and the second quarter of 1983.

IBFs engage primarily in transactions with other banks. At the end of August 1983, 63 percent of IBF assets represented claims on other banks (excluding U.S. offices of parent banks).

The Federal Reserve's objective in establishing IBFs was to enhance the competitiveness of banks in the United States in international banking. U.S. competitiveness in international banking declined with the emergence and development of the Euro-currency market, a form of international banking, in the 1960s. However, removal of U.S. capital controls and interest rate

¹Subsidiaries of banks which engage exclusively in international transactions. They may have offices outside the state where their parent corporations are located.

²The data on IBF assets are for IBFs with assets of \$50 million or more. They account for about 98 percent of the assets of all IBFs, according to the Federal Reserve.

ceilings on large time deposits in the early 1970s halted the erosion of U.S. competitiveness. IBFs removed the remaining significant obstacle to improving the U.S. position--reserve requirements.

Some proponents of IBFs claimed that they would also have a favorable impact on U.S. employment, tax receipts and banking efficiency. Skeptics retorted that there would be no large impact on employment and tax receipts because IBFs were likely to attract mostly business from offshore shell branches, whose business was already conducted mainly in the U.S. offices of their parent banks.

OBJECTIVES, SCOPE, AND METHODOLOGY

We examined three projected outcomes of IBFs. First, we focused on the objective of enhancing the competitiveness of banks in the United States in international banking, the purpose of the Federal Reserve in permitting the establishment of IBFs. For examination of this issue, we relied mainly on an econometric model designed to explain variation in the share of banks in the United States in international banking (see ch. 4 and app. I) and other analyses of quantitative data, supplemented by interviews with bank officials. A related but subsidiary issue we examined is whether IBFs have increased the share of U.S. chartered banks on a consolidated basis, i.e., including their overseas branches. We used quantitative analysis and materials from interviews to explore this question.

Second, by examining shifts in the geographical location of international banking, we attempted to assess whether IBFs have increased U.S. employment and associated benefits. Our analysis was supplemented by interviews with bank officials.

Third, we examined by econometric analysis whether IBFs have increased the global volume of international banking. (See app. II.)

We interviewed officials at 72 banks which have established IBFs located in major U.S. financial centers--Atlanta, Chicago, Detroit, Los Angeles, Miami, New York, and San Francisco. These banks represented about 15 percent of all IBFs as of August 1983 and about 40 percent of total IBF assets. The sample was about evenly divided between U.S.-chartered banks and agencies and branches of foreign banks.

CHAPTER 2

ESTABLISHMENT AND DEVELOPMENT OF THE EUROCURRENCY MARKET

The Eurodollar market is the system in which Eurodollars, dollars deposited in banks outside the United States, are lent and borrowed, primarily among non-resident banks. Similarly, the market for other Eurocurrencies is the system in which other currencies deposited outside the countries where they originate are lent and borrowed, primarily among non-resident banks. Essentially, the Eurocurrency market is a form of international banking.

In the key Eurocurrency countries these deposits are free from domestic monetary regulation and capital controls. Thus, banks located in these countries had a competitive advantage over banks in the United States because they were not subject to the costs of such regulation. The creation of IBFs and the U.S. removal of both interest rate ceilings on large deposits and capital controls eliminated this competitive disadvantage.

EMERGENCE AND EARLY DEVELOPMENT

Some analysts trace the origins of the Eurocurrency market to early post World War II Chinese and Soviet deposits of dollars with European banks. In 1949 the new Chinese Communist government began disguising its dollar earnings by placing them with the Soviet-owned Banque Commerciale pour l'Europe du Nord in Paris. This occurred even before Peking's dollar balances in the United States were blocked under legislation forbidding trade with the enemy after the outbreak of the Korean War in 1950. Soon after, the Soviet bank in Paris and the Moscow Narodny Bank in London also began disguising their dollar holdings out of fear that they might be blocked. However, the market did not really get underway until the late 1950s, with the restoration of currency convertibility in Europe and the imposition of restrictions by the British government on the use of sterling credits.

In the early post World War II period, international banking consisted mainly of domestic currency financing (i.e., in the country where the currency originated) of foreign trade.¹ However, more than 40 percent of world trade was invoiced in sterling. Thus, London continued its pre-war role as a center of international banking. In this period, the time of the great "dollar shortage," European countries strictly controlled private transactions on current and capital accounts that involved

¹Much of the material in this section (pp. 3-5) is drawn from R. McKinnon, The Eurocurrency Market, Princeton University, Dec. 1977.

payment in U.S. dollars. London banks provided sterling finance for many European firms for intra-European trade and they also provided trade financing for "sterling area" countries--former British colonies like Australia, India, and Nigeria.

Two events precipitated a decline in sterling-denominated international banking.

1. The British authorities prohibited sterling financing of non-United Kingdom trade, even among sterling area countries, after a speculative run on sterling in 1957.
2. In December 1958, 10 European countries removed all restraints on foreign exchange conversions for the purpose of current account transactions; another 20 European and associated countries did the same in 1959. Commercial banks and European exporters now had full authority to take long or short positions in U.S. dollars and in any currency in which they had a trading interest.

These changes could have led to a shift of international banking away from London to other European centers, Japan, and the United States. However, continued restrictions on international capital movements and monetary regulation diminished the attractiveness of European and Japanese commercial banks as sources of trade finance.

In contrast, the United States at the time had no restrictions on capital movements, a relatively easy monetary policy, and a highly developed international securities market. The decline of sterling finance and the restoration by Western European nations of convertibility for dollars as well as other currencies found the United States in position to be the dominant world financial center. However, the imposition by U.S. authorities of capital controls and interest rate ceilings at lower than market rates aborted this development.

During the 1960s controls were imposed on the flow of capital from the United States by (1) the Interest Equalization Tax, which imposed a tax on the sales of foreign securities in the United States, (2) voluntary restraints by banks in the United States (not their overseas branches) on their foreign lending, and (3) restrictions placed on American firms for raising funds to finance their overseas investments.

Interest rate ceilings on U.S. savings and time deposits had been in existence since the 1930s. During periods of tight money, these ceilings acted to keep U.S. deposit rates below those obtainable elsewhere and even below those obtainable on other U.S. money market instruments. These ceilings restrained U.S. domestic deposit rates on several occasions in the 1960s.

While the U.S. financial system was impeding international banking, Great Britain and other European countries were working to encourage its development. The British authorities differentiated between deposit and loan transactions in sterling and those in foreign currencies. British banks were allowed to accept and make loans in dollars and in any currency other than sterling free from restraints. Other countries followed Britain's example. Bank authorities in most European countries have discriminated in favor of foreign-currency banking, especially for non-residents. In many cases, international (foreign currency) banking has been altogether free of reserve requirements and other quantitative restrictions.

Only one European country--West Germany--extends domestic monetary regulations to its banks' foreign currency transactions with non-residents. No controls have ever been imposed in Great Britain and France. In Belgium, Luxembourg, and the Netherlands, the monetary authorities have some power to restrict Eurocurrency transactions, but in practice this power has not been used; Switzerland had minimum reserve requirements on foreign currency deposits but these were removed in 1977.

During the 1960s the Eurocurrency market grew rapidly and the U.S. share in international banking declined markedly. Between September 1963, the earliest available date for systematic data on Eurocurrency markets, and the end of 1969, the short-term dollar currency assets of commercial banks in nine major countries (excluding the United States) expanded from \$9.3 billion to \$53 billion, an annual growth rate of 32 percent. The competitive position of banks in the United States in international banking, as measured by the ratio of short-term foreign dollar assets held by these banks to short-term dollar assets of banks in the nine countries, decreased from 0.52 at the end of September 1963 to 0.17 at the end of the decade.

This spectacular growth of the Eurocurrency market does not mean that U.S. chartered banks on a consolidated basis, i.e., including their overseas branches, lost out competitively. Much U.S. international banking was shifted to overseas branches of U.S. chartered banks because they were not affected by monetary restrictions and capital controls. Between the end of 1964 and the end of 1970, the number of U.S. banks with overseas branches expanded from 11 to 79, the number of branches grew from 181 to 536, and their assets increased from \$6.9 billion to \$52.6 billion.

The attractiveness of Eurocurrency markets during this period was due to several factors. Their main appeal appears to have been freedom from domestic monetary regulation and capital controls. This was reflected in the narrower spreads between borrowing and lending rates in Eurocurrency markets than those prevailing in the United States and other national (domestic) markets. In addition, the Eurocurrency market offered a range

of geographical, country, and institutional risks which catered to the emerging desire of investors to diversify their investments.

EVOLUTION OF THE MARKET IN THE 1970s AND EARLY 1980s

The Eurocurrency market adopted several innovations during the 1970s. Loans were priced on a floating rate basis, i.e., interest rates were altered every 3, 6, or 12 months in line with prevailing rates. Syndication came to be an important technique for extending large medium-term credits. This allowed a greater sharing of risks among banks and increased the size of loans available to borrowers.

In the early 1970s the geographical location of the market expanded from Western Europe to encompass the globe. Banks established "offshore" branches in the Caribbean, the Near East, and Southeast Asia. Banks in these countries became known as "offshore branches."

Offshore branches are usually in small countries where banking is attracted by favorable tax treatment as well as by the absence of monetary regulation. Transactions are concentrated in accepting foreign deposits and lending them elsewhere, although some offshore activity involves lending to local residents. Usually, most banking in such branches is actually conducted by the domestic offices of the parent bank. Such offshore banks are sometimes called "shells" or "brass plate" offices since little or no activity is actually conducted at their sites.

The growth of offshore branches has been impressive. Between the end of 1974 and September 1981, the foreign dollar assets of offshore branches of U.S. banks in the Bahamas, Cayman Islands, and Panama increased from \$31.5 billion to \$152.7 billion, an annual rate of increase of about 27 percent. (With the advent of IBFs the rate has declined somewhat.) The ratio of U.S. offshore branch assets to similar assets of other banks in other Bank for International Settlements (BIS) reporting centers rose from 0.17 to 0.24 during the same period.

Halt in decline in U.S. competitiveness

The growth of the Eurodollar market at the expense of international banking conducted on American soil was stopped by two regulatory actions of the early 1970s. U.S. capital controls were removed in 1974 and U.S. interest rate ceilings for time deposits of \$100,000 or more were eased in 1970 and removed

entirely in 1973.² These restraints had been the most important impediments to U.S. participation in international lending from U.S. locations.

The erosion of U.S. competitiveness was stopped with these actions. In fact, the ratio of foreign dollar assets of banks in the United States to those of banks elsewhere rose from 0.18 at the end of 1974 to 0.27 in September 1981.

The one remaining significant advantage of the Eurocurrency market was freedom from reserve requirements. This was thought to be less important than those advantages which had been eliminated--freedom from capital controls and interest rate ceilings on large time deposits.³

²Most transactions in the Eurocurrency market are above \$100,000.

³The lesser importance of reserve requirements may in part reflect the fact that until shortly before the advent of IBFs, branches and agencies of foreign banks located in the United States were exempt from reserve requirements. (See discussion on choosing the dependent variable for measuring impact of IBFs on the U.S. competitive share in international banking in app. I.)

CHAPTER 3

ESTABLISHMENT AND DEVELOPMENT OF INTERNATIONAL BANKING FACILITIES

In June 1981, the Federal Reserve Board authorized banks in the United States to establish international banking facilities beginning in December of that year. The Board's stated objective was to improve the U.S. competitive position in international banking.

Proposals for this type of facility had been discussed for more than a decade, while IBFs as such were actively considered for 3 years prior to final approval. Their principal advocate, the New York Clearing House Association¹, submitted two separate proposals to the Board in 1978 and 1980, stressing the increases that would follow creation of IBFs in employment, tax receipts, and banking efficiency. The Board finally permitted establishment of IBFs after several restrictions were adopted to control their possible interference with effective monetary policy and to ameliorate non-New York bankers' concerns about the perceived unfair advantages New York banks would gain in the new market.

PRELIMINARY PROPOSALS

IBF-type proposals were first made in the early 1970s to allow banks in the United States to do business with foreigners free of capital and monetary controls. After the removal of capital controls in 1974, the IBF concept resurfaced as a method of reducing the impact on banks of domestic reserve requirements. Proposals for IBF-type facilities--"free trade banking zones," "foreign windows," and "domestic international banking units"--were recommended by Federal Reserve officials, private bankers and a House Banking Committee study. The Federal Reserve did not adopt the proposals, however, because of concerns that such facilities might thwart monetary policy and might be geographically concentrated in New York to the disadvantage of other American banking centers.

FIRST NEW YORK CLEARING HOUSE ASSOCIATION PROPOSAL

In July 1978, the New York Clearing House proposed that the Federal Reserve permit banks to establish IBFs to deal with foreign customers free of reserve requirements and interest rate ceilings. The New York State legislature had already passed legislation encouraging the establishment of IBFs in New York by

¹A group of New York banks; it provides for the daily exchange of checks, coupons, stock certificates, and settlement of balances held by each member against the others.

reducing state and city taxes on domestically booked international banking transactions. These tax reductions were made contingent upon favorable Federal Reserve action on the Clearing House proposal.

The proposal cited a number of benefits to the public and the banking community to be derived from establishing IBFs. Primary among these was a projected increase in employment created by shifts in banking activity from overseas locations to IBFs and an increase in the U.S. share of international banking. The new jobs would not be limited to the banking industry but would occur in related services such as real estate, law, and accounting. The Clearing House proposal projected between 5,000 and 6,000 new jobs in New York City alone, with an annual payroll of \$90 million. Similar growth, it was claimed, could be expected in other urban centers where IBFs were located. The increased level of U.S.-based activity would also generate a higher level of tax revenues.

The proposal also predicted that IBFs would improve the administrative efficiency of banks and reduce their exposure to country risk. By enabling them to engage competitively in international banking from domestic locations, IBFs would allow banks to consolidate activity in fewer locations, resulting in improved efficiency and reduced cost. Relocating activity from offshore locations to IBFs could also reduce banks' country risk exposure.

Public comment on the proposal

The Federal Reserve Board invited public comment on the Clearing House proposal; 42 percent of the responses were favorable and came primarily from sources interested in New York City as an IBF location. Another 42 percent generally favored the IBF concept but not the specific Clearing House proposal. The remaining responses opposed both the IBF concept and the Clearing House proposal. They came from several non-New York bankers, a trade association, and individuals outside New York.

Non-New York bankers objected to the specific Clearing House proposal because they believed it gave a competitive advantage to New York based banks and that New York City would be the center of IBF activity. Because of the McFadden Act restriction on interstate banking, non-New York banks could enter the New York market only through Edge Act Corporations. "Edges" would be at a disadvantage because of their small capital size and lending restrictions.²

²A parent bank cannot invest more than 10 percent of capital and surplus in its Edge Act Corporation. "Edges" must maintain a minimum capital and surplus level of 7 percent of their "risk assets" and they may not loan more than 10 percent of capital and surplus to any one borrower.

A number of these bankers called for amendment of the McFadden Act to permit establishment of special purpose branches in New York to engage in international banking. Several bankers stated that geographic competitive balance could be achieved only if non-New York banks had accounts with the Federal Reserve Bank of New York and direct access to the transaction clearing system operated by the New York Clearing House Association. According to these bankers, lack of direct access to the clearing system increased their costs of conducting international payments, placing them at a competitive disadvantage in servicing their customers. Other respondents opposed the Clearing House proposal on grounds of possible leakage of funds from the domestic market into IBFs, which would affect the domestic money supply, and the Federal Reserve Board's lack of clear legal authority to exempt IBFs from reserves and interest ceilings.

Federal Reserve review

The staff of the Board of Governors of the Federal Reserve System examined the Clearing House proposal. They could not assess the benefits that organization had predicted for IBFs. Their significance, particularly the increase in employment, would depend on whether activities would be transferred from full service banking offices overseas or shell branches managed at the banks' parent locations. Since shell branch business is already handled in the United States, transfers from these offices would have no impact on employment. The staff could not determine the relative importance of the two possible sources of transfers.

The staff did conclude that shifts in assets from banks' foreign branches to IBFs should have no adverse impact on the credit risk associated with U.S. bank portfolios. They stated that foreign branch assets are generally of high quality because supervisory agencies give them special attention.

Three major issues were raised in the study. First, the Federal Reserve Act did not give clear statutory authority for the Board to exempt IBF liabilities completely from reserve requirements and interest rate ceilings of Section 19 of the Federal Reserve Act. However, the staff suggested that the Board could establish a new category of time deposits with a minimum maturity of one day, which would be free of reserve requirements. If such deposits were \$100,000 or more, they were already exempt from interest rate ceilings.

Second, IBFs could have a significant impact on monetary policy unless suitably restricted. For example, IBF accounts established by foreign subsidiaries of U.S. corporations might be used by the U.S. parent as substitutes for domestic checking balances. To prevent this, the staff suggested that majority-owned foreign subsidiaries of U.S. corporations be prohibited from holding IBF accounts and the maturity of IBF transactions be restricted.

The staff was also concerned that all foreign-owned deposits at commercial banks in the United States would be eligible for transfer to IBFs under the Clearing House proposal. Whether such shifts would affect the money supply (M-1)³, according to the staff, would depend on whether IBF accounts would be substituted for demand deposits.

Third, the staff felt that New York banks would have an advantage over banks in other locations if IBFs were not established in other cities and if non-New York banks were able to operate IBFs only as adjuncts of their Edge Act Corporations. If IBFs were not established outside New York, New York IBFs would be in a position to attract foreign business from banks in other parts of the country. The attractiveness of establishing an IBF through an Edge facility is limited because there are restrictions on their capitalization and hence their lending.

In July 1979, the Federal Reserve Board decided to defer action on the proposal because of concern about the three issues just described.

SECOND IBF PROPOSAL

In May 1980, the Clearing House resubmitted the IBF proposal with two modifications.⁴ The second proposal recommended that regulatory changes be deferred for 1 year to allow states in addition to New York to pass favorable tax legislation. The proposal also called for a minimum average balance of \$500,000 for IBF deposits to alleviate some non-New York bankers' concern that they could lose small foreign deposits to IBFs of large New York banks.

Public comment

The Board requested public comment on the second Clearing House proposal. There were 79 responses, 73 of which favored the IBF concept. Although favorable to the IBF concept, 20 responses from non-New York bankers objected to the Clearing House proposal, citing lack of direct access to the New York clearing system and restrictions on interstate banking that limited their entry into the New York market. The favorable responses cited enhancement of the U.S. position in international finance and return of shell branch business to the United States as the major benefits of IBFs.

Six respondents opposed the IBF concept. Some said that exempting IBFs from reserve requirements and interest ceilings detracted from the uniformity of rules governing deposits.

³Currency outside banks plus demand deposits.

⁴The American Bankers Association submitted similar recommendations.

Federal Reserve review

The Federal Reserve staff studied the second Clearing House proposal and made recommendations for Board consideration. The staff concluded that IBFs could somewhat enhance the international competitive position of banks in the United States. They also concluded that increased employment was likely to be minimal because IBFs would attract business mainly from shell branches. Such shifts would not create new jobs, since shell branch business was managed from U.S. locations. Increased tax revenues associated with this employment were therefore also likely to be minimal.

The staff recommended a number of restrictions on IBF activity to reduce their impact on domestic monetary policy. IBFs could be limited to international business with non-U.S. residents, including banks, other IBFs, and the parent institution. IBFs could accept deposits and extend credit only to support a customer's non-U.S. operations. Advances to U.S. offices of the parent institution would be subject to the same Eurocurrency reserve requirement as advances from a bank's overseas branches.

The staff suggested several options for ensuring that IBFs be used only to support non-U.S. activity. Among them was a requirement that IBFs be required to notify non-bank customers concerning the prohibition of the use of IBF proceeds in the United States. The staff was concerned that non-bank customers might use reserve-free IBF funds as substitutes for domestic funding sources with reserve requirements.

The staff also recommended a 2-day minimum deposit maturity for non-bank depositors and a minimum transaction size of \$100,000. These restrictions were intended to prevent distortion of money supply totals. The staff feared that non-banks, particularly U.S. corporations through foreign subsidiaries, might use IBF accounts for checking purposes. Since checking transactions are a major portion of the money supply, the Board's ability to interpret changes in the money supply might be affected. The staff felt that the \$100,000 minimum would achieve these objectives yet not prohibit small regional banks from doing IBF business.

The staff suggested that IBFs not be permitted to issue negotiable instruments such as certificates of deposit. When a bank issues a negotiable instrument, the purchaser can resell the instrument to a third party. The bank has no control over the resale. The staff was concerned that negotiable instruments issued by IBFs might become part of the domestic money supply through resale to U.S. residents.

BOARD AUTHORIZATION OF IBFs

In June 1981 the Federal Reserve authorized banks to establish IBFs, as of December 1981, which could lend to foreigners

and accept their deposits free from interest rate ceilings and reserve requirements. The Board resolved its concerns about the impact of IBFs on monetary policy by adopting these restrictions on IBF activity:

- A requirement that banks notify non-bank customers concerning the Federal Reserve limits on use of IBF proceeds. The Board added a requirement that non-bank customers that are foreign affiliates of U.S. residents affirm in writing that IBF proceeds will be used outside the United States.
- A minimum maturity of 2 business days on deposits by non-banks.
- A minimum transaction size of \$100,000 for non-bank customers.
- A restriction against issuing negotiable certificates of deposit as IBF liabilities.

The Board's favorable decision was made possible by developments which resolved their remaining two concerns. The legal status of reserve requirement exemptions was resolved by provisions of the Monetary Control Act of 1980. Section 103 of this Act exempted from reserve requirements deposits, including IBF deposits, payable outside the United States.

The Board's concerns about IBF impact on equity between New York and non-New York banks were eased by the Clearing House Association granting non-New York banks direct access to their clearing system and the \$100,000 minimum for IBF transactions.

EXEMPTION FROM FEDERAL DEPOSIT INSURANCE CORPORATION ASSESSMENTS

The International Banking Facility Deposit Insurance Act of 1981 exempted IBF deposits from Federal Deposit Insurance Corporation (FDIC) insurance coverage and premium assessments. Before this Act, it appeared that IBFs of U.S.-chartered banks might be required to pay FDIC insurance premiums against their deposits. Although not as significant as reserve requirements, such assessments may have increased the cost of banking at IBFs and thus reduced their attractiveness compared to Eurocurrency locations, which are not subject to similar insurance assessments.

CHAPTER 4

IMPACT OF INTERNATIONAL BANKING FACILITIES

The Federal Reserve's objective in establishing IBFs was achieved. There has been a substantial improvement in the U.S. competitive position in international banking since the advent of IBFs. Dollar loans and other dollar-denominated claims on foreigners which are held as assets by U.S. banks and offices of foreign banks operating in the United States increased 77 percent, from \$209.9 billion in September 1981 to \$372.4 billion in June 1983. During the same period, comparable assets held by banks outside the United States increased by only 6 percent, from \$782.9 billion to \$830.2 billion. Econometric and other analyses indicate that this improvement is ascribable to IBFs. In addition, IBFs have probably prevented or mitigated declines in U.S. banking employment and associated benefits.

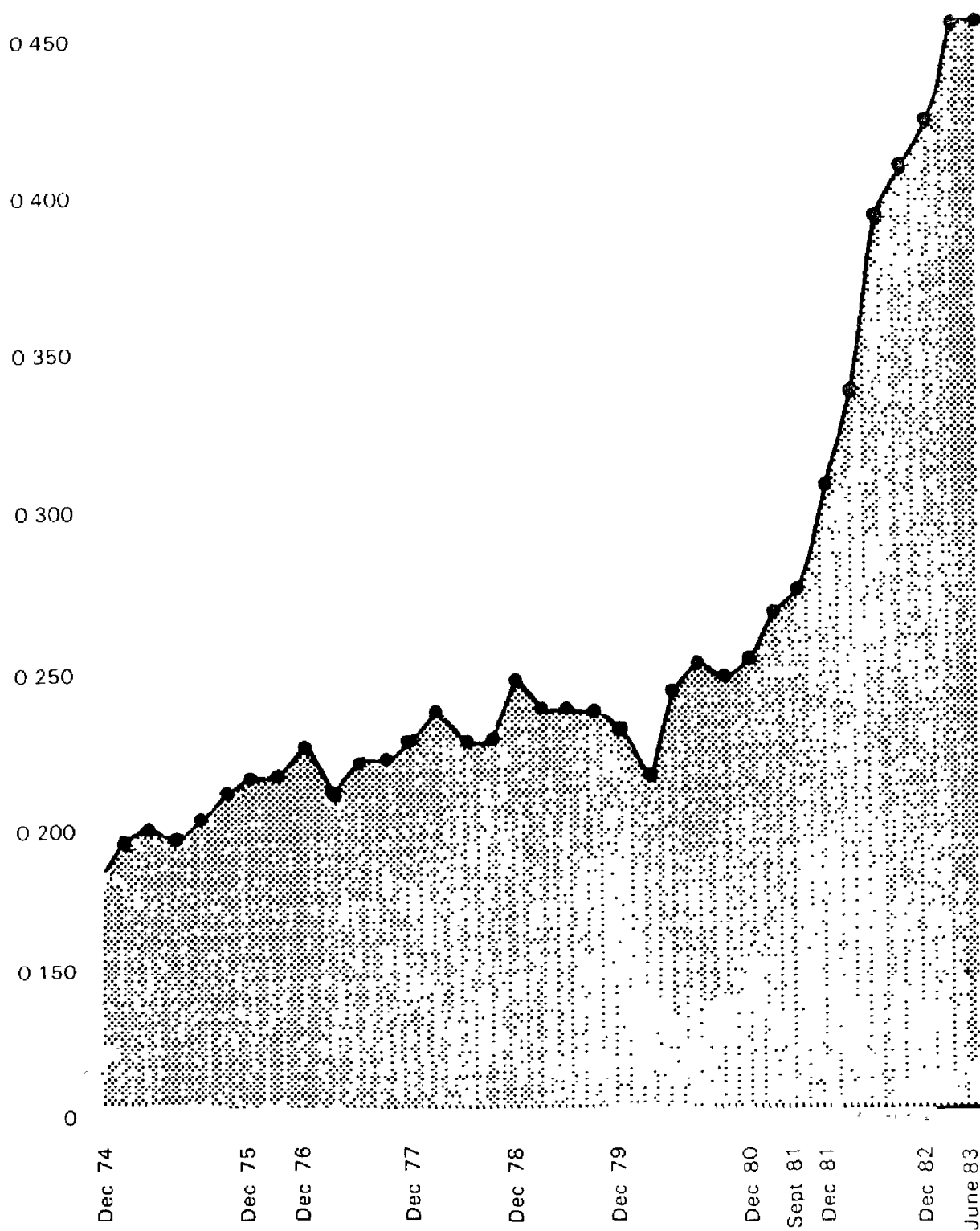
IMPACT ON COMPETITIVENESS IN INTERNATIONAL BANKING

For ease of analysis, we measure competitiveness as the ratio of foreign dollar assets of banks in the United States¹ to foreign dollar assets of banks located elsewhere (Western Europe, Canada, Japan, and U.S. branches in the Bahamas, Cayman Islands, and Panama.) The graph on p. 15 shows the change in this ratio from the end of 1974 to the end of the second quarter of 1983. The ratio of foreign dollar assets of banks in the United States to those of banks elsewhere increased from 0.27 in September 1981 to 0.45 in June 1983, a 67 percent rise. Thus, a substantial improvement in the U.S. competitive position occurred after establishment of IBFs.

This substantial improvement in the U.S. competitive position is not necessarily ascribable to IBFs. The period was characterized by international financial turmoil. Many countries had difficulty servicing their international debts. Investors may therefore have preferred keeping funds in the United States, believing that U.S. laws and political stability

¹Nearly all of the foreign assets of banks in the United States and about two-thirds of the foreign assets of banks elsewhere are denominated in dollars. Inclusion of foreign currency-denominated assets would tend to increase the U.S. share in international banking, expressed in dollars, when the dollar appreciated against other currencies and decrease the U.S. share when the dollar depreciated because banks elsewhere do more of their international business in non-dollar currencies than do banks in the United States. In addition, the analytical framework used to explain the evolution of the competitive position of banks in the United States in international banking in this chapter and app. I focuses on dollar-denominated transactions.

Ratio of Foreign Dollar Assets of Banks in
the United States to Those of Banks Elsewhere



Source Bank for International Settlements and Federal Reserve

provide greater assurance of safety of principal and access to their funds compared to other market centers. Hence, it is possible that the improvement in the U.S. competitive position was due to preference for U.S. location.

We devised an econometric model to determine whether IBFs were a significant factor in this change. The model tested for the effects of IBFs, preference for U.S. location, and preference for location elsewhere. There do not appear to be any other factors which could explain the sharp improvement in the U.S. competitive position. The model, data, and results are described in detail in appendix I.

The model results indicate that IBFs have brought about the substantial improvement in the U.S. competitive position. Preference for U.S. location does not appear to have been a determinant. Also, bankers informed us that there has been no differential between IBF deposit rates and comparable Eurodollar deposit rates; if U.S. location were preferred, deposit rates in the United States should have been at least somewhat lower. Although preference for location elsewhere was a determinant of the U.S. competitive position at certain times, the data do not show any such preference for more than a year prior to the creation of IBFs and in the period after their establishment.

Other evidence supports the econometric results concerning the importance of IBFs in improving the U.S. competitive position. For instance, the model understates the responsiveness of banks in the United States to IBFs because it does not directly reflect the reaction of U.S. agencies and branches of foreign banks to IBFs. Such banks are especially sensitive to reserve requirements, which have been eliminated for their IBF eligible business. Until 1980 U.S. agencies and branches of foreign banks were not subject to reserve requirements. Under the International Banking Act of 1978 and the Monetary Control Act of 1980, reserve requirements for their deposits were established and phased in beginning in November 1980 to make them equivalent to those on deposits of domestically chartered institutions. Agencies and branches of foreign banks must usually pay higher yields on their certificates of deposit than U.S.-chartered banks in order to successfully attract depositors. Lack of a reserve requirement helped to offset this extra cost. About 60 percent of the foreign-chartered bank officials we interviewed said that their business in the United States would have been curtailed without the continued exemption provided by IBFs.

Furthermore, the improvement in the U.S. competitive position since establishment of IBFs was larger than in any other period since the end of 1974. Thus, the ratio of foreign dollar assets of banks in the United States to those of banks elsewhere rose from 0.18 at the end of 1974, its lowest level, to 0.27 in September 1981, its highest level before the advent of IBFs, a rise of 50 percent. By contrast, the ratio increased 67 percent between September 1981 and June 1983. Considering the reluctance of banks to increase their foreign loans in this period,

this is a remarkable expansion. Moreover, nearly all of the rise in the U.S. share occurred in IBFs. Thus, IBFs accounted for 96 percent of the rise in foreign dollar assets of banks in the United States between September 1981 and June 1983. Finally, other analyses of the growth of international banking activity in 1982 assign a critical role to IBFs in the rise in U.S.-based activity.²

The remarkable expansion of the U.S. competitive position in international banking also implies that the restrictions on IBFs discussed in chapter 3 have not significantly restrained the growth of U.S.-based international banking. This was generally confirmed in our bank interviews; officers of two-thirds of the banks we interviewed stated that the restrictions on IBFs have had little if any impact on their business.

IMPACT ON GLOBAL POSITION OF U.S. CHARTERED BANKS

U.S.-chartered banks should have had the same reluctance as banks elsewhere to expand international activity during the recent international debt crisis. It was therefore unlikely that the advent of IBFs would increase the overall global share, on a consolidated basis, of U.S. chartered banks (i.e., in foreign as well as in U.S. locations) in international banking.

The quantitative evidence shows that no increase occurred in this share. As shown in the table on p. 18, U.S.-chartered banks' share of international banking assets was essentially unchanged in 1981 and 1982.³ Officials we interviewed at U.S.-chartered banks told us that IBFs did not change the global position of their banks.

²See, for example: H. S. Terrel and R. H. Mills, International Banking Facilities and the Eurodollar Market, Federal Reserve Staff Study, August 1983, pp. 2-4, or The Annual Report of the Bank for International Settlements, 1982, p. 110.

³In one Federal Reserve staff study (cited in footnote 2), the U.S. share is adjusted for the smaller coverage of banks elsewhere by BIS in their quarterly data and for changes in the value of the dollar. These changes do not materially alter the results.

U.S.-Chartered Banks' Share on a Consolidated
Worldwide Basis of Total International
Banking Assets

<u>Year</u>	<u>Ratio</u>
1981:	
June	.297
September	.303
December	.292
1982	
March	.297
June	.310
September	.306
December	.299

Source: P. 6 of Federal Reserve staff study. (See footnote 2.)

IMPACT ON U.S. EMPLOYMENT AND
ASSOCIATED BENEFITS

IBFs probably prevented or mitigated declines in U.S. employment and associated benefits that would otherwise have taken place. They did not produce significant increases, at least partially because international lending decreased in the face of the international debt crisis.

As described in chapter 3, the New York Clearing House Association maintained in its 1978 proposal that IBFs would generate employment, increase tax revenues, and improve the efficiency of U.S. banks. The Clearing House had predicted that 5,000 to 6,000 jobs would be created in New York City alone. In addition to increased tax revenues from enlarged employment, IBFs would increase federal tax revenues through reduction of the foreign tax credits that banks apply to their U.S. tax liabilities from operation of overseas branches. IBFs would also induce greater efficiency by enabling banks to concentrate their international banking in domestic locations.

The Federal Reserve staff⁴ and others believed that the New York Clearing House overstated these benefits. The staff stated that IBFs were likely to attract principally business transacted at offshore shell branches of U.S. banks, which in actuality is already conducted in the United States. Shell branches usually have no staff of their own so there would be few or no staff to relocate to stateside locations upon establishment of IBFs.

⁴In its Oct. 31, 1980 study.

Similarly, shell operations are exempt from foreign taxation, so there would be no reduction in foreign tax credits to increase federal tax revenues. According to the staff, there would be little shifting of activity from U.S. overseas branches, such as those in London or in Paris, to IBFs. Only such shifting is capable of generating employment and other real activity in the United States. U.S. banks would maintain these offices because of the need to maintain marketing and customer services in locations that can accommodate customers in other time zones.

The Federal Reserve staff also maintained that agencies and branches of foreign banks were not likely to generate significant real activity in the United States through IBFs. U.S. offices of foreign banks would be likely to continue doing the same business these offices were previously doing without IBFs. However, the staff recognized that in the absence of IBFs, foreign banks might shift their U.S. agency and branch business to overseas locations to avoid the newly imposed reserve requirements.

Like the Federal Reserve staff, we attempted to assess benefits to the United States generated by the establishment of IBFs by examining the pattern of the geographical shift in the location of international banking associated with the advent of IBFs. We augmented this analysis with bank interviews.

Contrary to the Federal Reserve staff's prediction, the improvement in U.S. competitiveness came less at the expense of shell branches and more at the expense of other banks. The counterpart to the marked improvement in the U.S. competitive position was a decline in the ratio of foreign dollar assets of banks elsewhere to those of banks in the United States, from 3.73 in September 1981 to 2.23 in June 1983. U.S. offshore branches in the Bahamas, Cayman Islands, and Panama, most of which are shell branches, accounted for 21 percent of this decline, while banks located in other non-U.S. centers accounted for 79 percent.

The large shift from non-shell branches is corroborated by other quantitative evidence. The assets of overseas branches of U.S. (Federal Reserve) member banks in the Bahamas and Cayman Islands declined by \$891 million in 1982, but those of branches in the United Kingdom and Ireland declined by \$3,459 million and those of branches in Continental Europe declined by \$3,223 million.

This pattern of geographical shift in the location of international banking suggests that the United States has gained from the establishment of IBFs. However, our bank interviews indicated that there have been no significant increases in employment and other real activity associated with IBFs in the United States. Officials at only 15 of the banks we interviewed said that their staff had increased because of IBFs. Ten of

them placed a number on the increase; only 55-67 new jobs were reported to have been created by IBFs among the banks we interviewed.

Instead, establishment of IBFs probably prevented declines or mitigated any declines which occurred. In the wake of the international debt crisis and the induced reluctance of banks to lend to foreigners, U.S. employment and other benefits associated with international banking might have declined or might have declined more but for the advent of IBFs. IBFs in effect prompted banks in the United States to shift more of the burden of the international debt crisis to their non-shell overseas locations. Also, as already mentioned, most foreign bank representatives we interviewed said that without the zero reserve requirements provided by IBFs, their business in this country would have been curtailed.

IMPACT ON GLOBAL INTERNATIONAL BANKING

IBFs might have increased the global volume of international banking if, for example, British corporations shifted their source of finance for domestic activity from British banks to IBFs, i.e., from domestic banking to international banking. It is unlikely, however, that this occurred because British firms already had the opportunity to obtain international financing, i.e., Eurocurrency financing, in London for their domestic operations. The same point may be made about any other country whose residents already had access to the Eurocurrency market. American firms were legally barred from shifting from domestic to IBF financing of their domestic operations. The same point may be made about any other country whose residents already had been barred from using international finance for domestic operations.

Nevertheless, we tested for this unlikely possibility by applying, with some modifications, an econometric model of the growth of international bank assets constructed by staff of the International Monetary Fund. (See app. II.) The results indicate that IBFs have had no impact on the level of global international banking.

AGENCY COMMENTS

The Board of Governors of the Federal Reserve System did not comment on the report because it contains no recommendations. However, Federal Reserve staff commented that GAO's analysis generally confirmed their own.

MODEL USED TO ASSESS THE IMPACT OF IBFs
ON THE SHARE OF BANKS IN THE UNITED STATES
IN INTERNATIONAL BANKING

The model has the following form:

$$G = b_1 + b_2C + b_3P_u + b_4P_e + E$$

Variable Descriptions

<u>Variable</u>	<u>Definition</u>
G	Ratio of foreign dollar assets of U.S. offices of U.S.-chartered banks to those of banks elsewhere, net of interbank claims among banks elsewhere.
C	Impact of IBFs. This is set equal to 0 in the quarters before IBFs are established and to 1 after their establishment.
P_u	<p>Preference for U.S. location.</p> $P_u = 1 \text{ if } \left[I_e - \frac{I_u + D}{1 - RR_u} \right] > 0; \text{ otherwise } P_u = 0.$ <p>I_e is interest rate on 3-month Eurodollar deposits (bid rate).</p> <p>I_u is interest rate on large 3-month U.S. certificates of deposit (dealers' bid rate in the secondary market).</p> <p>D is FDIC deposit insurance assessment rate.</p> <p>RR_u is reserve requirements on large U.S. certificates of deposit.</p>
P_e	<p>Preference for location elsewhere (i.e., other than the United States).</p> $P_e = 1 \text{ if } \left[\frac{I_u + D}{1 - RR_u} - \frac{I_{eo}}{1 - RR_e} \right] > 0; \text{ otherwise } P_e = 0.$

I_{eo} is interest rate on 3-month Eurodollar deposits (offer rate).

RR_e are reserve requirements for U.S. banks on their net borrowings from overseas branches.

All other terms as defined above.

b_i Estimated regression coefficients,
 $i = 1-4$.

E Random error.

The model postulates that the competitive position of banks in the United States in international banking, G , is a function of the impact of IBFs, C , preference for U.S. location, P_u and preference for location elsewhere, P_e . The model is estimated using ordinary least squares regression. The test period for the model runs from the fourth quarter of 1974, the earliest date for which critical data from the Bank for International Settlements are available and after the elimination of all U.S. capital controls in early 1974, through December 1982.

The variable C is an indicator of the impact of IBFs. It reflects the absence (pre-IBF) or presence (post-IBF) of the exemption from reserve requirements and deposit insurance for IBF business.¹ In the 1974-81 period, the principal cost advantage that the Eurocurrency market had over the U.S. domestic market for banks raising and lending funds was that Eurocurrency deposits in many countries were not subject to reserve requirements while U.S. deposits were.

Interest rate ceilings were also eliminated for IBF deposits. However, for deposits of \$100,000 (the minimum size of IBF deposits and less than the transaction size in the Euromarket) or more with maturities of 30 days and more, interest rate ceilings had already been effectively eliminated in the early 1970s. Under existing regulations, a bank could not issue a large certificate of deposit with a maturity of less than 30 days (less than 14 days after Oct. 1980). However, an investor could achieve the desired liquidity by turning to the secondary market

¹Although the results of the model reported here assume that a one-step adjustment occurred after the establishment of IBFs, we also estimated a model that assumed the adjustment was spread over the IBF period. The results of this modification to the model were substantially equivalent.

and selling a certificate at a market rate of interest after holding it for any period of time less than its original maturity.²

The preference variables are based upon the arbitrage role of U.S. banks in eliminating interest rate differentials between the domestic and Eurodollar markets through transactions with their overseas branches. U.S. banks have been found to be the primary channel linking these two markets. U.S. banks could be expected to take advantage of any opportunity to increase profits by either investing in or borrowing from their overseas branches. Persistent failure to take full advantage of these opportunities may indicate a preference for either U.S. or foreign locations.

If U.S. banks can increase profits by investing in Eurodeposits and they do not take full advantage of the opportunity, there may be a preference for U.S. location. If the Eurodollar deposit rate exceeds the effective cost of raising funds in the U.S. domestic market (the rate of interest adjusted for reserve requirements and the cost of deposit insurance), U.S. banks have an incentive to borrow domestically (e.g., by issuing certificates of deposit) and redeposit (i.e., invest) the proceeds with their overseas branches. The banks' actions in taking advantage of such an opportunity should eliminate the interest rate differential. Persistence of a positive differential between the Eurodollar deposit rate and the effective cost of U.S. funds may be due to a preference for U.S. location.

Similarly, if U.S. banks can increase profits by borrowing in the Eurocurrency market and they do not take full advantage of the opportunity, there may be a preference for location outside the U.S. If the effective cost of borrowing from their

²Exemption from state and local income taxation enacted by several states in conjunction with the establishment of IBFs may also have helped increase the U.S. competitive position. Without such exemptions, the income to banks from IBF operations would have been regarded just like local income in many states and hence subject to state and local taxation. However, several states already did not tax any local income of banks. Moreover, there is some indication that state and local taxation may be relatively unimportant in determining the location of international banking. Thus the New York City and State tax authorities have ruled that income from offshore shell branches of banks are subject to state and local taxation. However, assets of offshore branches of member banks located in the Bahamas and Cayman Islands, many of which are owned by N.Y. banks, declined less in 1982 than assets of their overseas branches located in Europe.

overseas branches (the Eurodollar offer rate adjusted for reserve requirements on net borrowings from overseas branches) is below the effective cost of raising funds in the domestic market, U.S. banks have an incentive to borrow from their overseas branches to fund their domestic portfolios. The banks' actions taking advantage of such an opportunity should eliminate the interest rate differential. Persistence of a positive differential between the effective cost of borrowing in the domestic market and the effective cost of borrowing in the Euromarket may be due to preference for non-U.S. location. In 1979, the period in which this type of differential was concentrated, the Euromarket was flooded with deposits in the wake of the second oil crisis, reflecting the preference of OPEC countries for holding dollars in Europe rather than in the United States. Although U.S. banks shifted from being net suppliers to net takers of Eurofunds, they could not absorb sufficient funds to eliminate the differential. Also during late 1979 and 1980, preference for the Euromarket may have been stimulated by reaction to U.S. blocking of Iranian-owned assets and the Federal Reserve's credit restraint program.

The value of variable C was set equal to 0 for all quarters between the end of 1974 and the end of 1981.³ It was set equal to 1 for each quarter of 1982. Average monthly data on interest rates, reserve requirements, and deposit insurance rates were obtained from the Federal Reserve. The two preference variables, P_u and P_e , were computed from these data. Values of 1 or 0 were assigned for all quarters, depending on whether at least two of the three monthly values in each quarter were 1 or 0.

The competitive position of banks in the United States in international banking is measured by the ratio of foreign assets of U.S. offices of U.S.-chartered banks to foreign assets of banks in Canada, Japan, and the major European countries and offshore branches of U.S. banks in the Bahamas, Cayman Islands, and Panama net of interbank transactions among banks outside the United States. The ratios were computed from quarterly data of the Bank for International Settlements and the U.S. Treasury from the end of 1974 to December 1982. The reason for excluding interbank transactions among banking centers elsewhere is to compare the position of banks in the United States, which is net of transactions among banks located in the United States, with a similarly consolidated position for banks elsewhere. The alternative measure, including interbank transactions among banks

³The value of C for the last quarter of 1981 was set equal to 0 even though IBFs were established in December, because IBFs were not in effect for two-thirds of the quarter. The model test results are substantially the same if the value of C for the last quarter of 1981 is set equal to 1.

elsewhere, compares the United States as a whole to the total of each separate banking center. This latter measure is used in chapter 4 because it allows for better evaluation of possible IBF-related employment and other associated benefits, which may flow from interbank as well as non-bank assets. It is used in other places in the text for consistency.⁴

Since U.S. branches and agencies of foreign banks were not subject to reserve requirements during most of the 1974-81 period, the numerator of the dependent variable, G , used in the model measures only the foreign assets of U.S. offices of U.S.-chartered banks. With the passage of the International Banking Act of 1978, agencies and branches of foreign banks were subject to reserve requirements and foreign branches with retail deposit operations were subject to insurance assessments on both large and small deposits. Reserve requirements were phased in beginning in 1980, and insurance requirements went into effect by the end of that year. We therefore assumed that the historical relationship of C to G , i.e., the regression coefficient, would hold for U.S. agencies and branches of foreign banks as well as U.S. offices of U.S.-chartered banks since establishment of IBFs. However, this is likely to understate the sensitivity of U.S. offices of foreign banks to reserve requirements, particularly in the post-1980 period, and hence the effect of IBFs upon them. Officials of U.S. offices of foreign banks told us that most of their offices would have had to curtail their business in the absence of this exemption.

The model results are shown in the following table. The coefficient of C is significant, positive, and relatively large. The coefficient of P_u has an unexpectedly negative sign, but is not statistically significant. As expected, the coefficient of P_e is negative and significant. However, the data do not indicate any such preference from the second quarter of 1980 through the fourth quarter of 1982.

⁴The model test results are substantially the same if interbank assets among banking centers elsewhere are included in the dependent variable.

Model Results With
G Measured Net of Interbank
Transactions Among Banking Centers Elsewhere

$$G = b_1 + b_2C + b_3P_u + b_4P_e + E$$

<u>Regression coefficient</u>	<u>Value</u>	<u>Standard error</u>	<u>T-statistic</u>
b ₁	0.30584	0.00700	43.72
b ₂	0.13273	0.01754	7.57
b ₃	-0.01974	0.01268	-1.56
b ₄	-0.06519	0.01340	-4.87
R ² = 0.777	\bar{R}^2 = 0.754	N = 33	SER= 0.0280

DW = 1.77 COND = 2.7567

R² = Coefficient of determination.

\bar{R}^2 = Coefficient of determination corrected for degrees of freedom.

N = number of observations.

SER = standard error of regression equation.

DW = Durbin-Watson statistic.

COND = Condition index, a measure for detecting collinearity among the independent variables. Weak multicollinearity is present with values around 5 or 10 and moderate to strong multicollinearity with values of 30 to 100.

MODEL USED TO ASSESS THE IMPACT OF IBFs
ON GLOBAL INTERNATIONAL BANKING

The model is adapted from a model explaining the growth of international bank assets formulated by staff of the International Monetary Fund.¹ In the reduced form of the model, the quarterly growth rate of global foreign assets of banks (in dollars), F , is a function of the quarterly growth rate of world imports (in dollars), I , the quarterly growth rate of the sum of GNP (in dollars) of the United States, Canada, Japan, West Germany, and the United Kingdom, Y , the quarterly rate of growth of the sum of the absolute values of trade deficits and surpluses of 56 countries divided by world imports, D , the impact of IBFs as measured by a dummy variable, B , the quarterly change in the foreign exchange value of the dollar, X , and a dummy variable, L , to reflect the possibility of bank "window-dressing" in the fourth quarter of the year.

The model was fitted to data supplied by staff of the IMF and the Federal Reserve. We modified the IMF staff's series on global foreign assets to include the assets of U.S. offshore branches in the Bahamas, the Cayman Islands, and Panama. The period covered was from the first quarter of 1975 through the second quarter of 1982.

The results of the model are shown in the following table. They indicate that IBFs have had no impact on global international banking. If IBFs had led to accelerated growth of international bank assets, the sign of the coefficient of B should have been positive. In fact, the sign was negative. The coefficient was also statistically insignificant.

¹See IMF staff, International Capital Markets: Recent Developments and Short-Term Prospects 1981, Occasional Paper No. 7 pp. 67-68.

Model Results

$$F = b_1 + b_2I + b_3Y + b_4D + b_5B + b_6X + b_7L$$

<u>Variable</u>	<u>Estimated Regression Coefficients (b_i)</u>	<u>Standard Error</u>	<u>T-statistic</u>
Constant	3.66125	0.82403	4.44
I	0.00312	0.09975	0.03
Y	0.11831	0.27278	0.43
D	0.06481	0.05144	1.26
B	-1.41622	1.30193	-1.09
X	-0.32811	0.10078	-3.26
L	5.48590	1.40460	3.91

$$R^2 = 0.748 \quad \bar{R}^2 = 0.682 \quad N = 30$$

$$SER = 2.1301 \quad DW = 2.17 \quad RHO = -0.28288 \quad COND = 5.681$$

R^2 = Coefficient of determination.

\bar{R}^2 = Coefficient of determination corrected for degrees of freedom.

N = number of observations.

SER = standard error of regression equation.

DW = Durbin-Watson statistic.

RHO = Autocorrelation coefficient.

COND = Condition Index, a measure for detecting collinearity among the independent variables. Weak multicollinearity is present with values around 5 or 10 and moderate to strong multicollinearity with values of 30 to 100.



BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

OFFICE OF STAFF DIRECTOR
FOR MANAGEMENT

May 4, 1984

Mr. William J. Anderson
Director General Government Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

I am responding to your letter to Chairman Volcker forwarding for comment the General Accounting Office report entitled "International Banking Facilities and the Competitive Position of Banks in the U.S.".

Because the report contains no recommendations to the Federal Reserve, the Board will have no comment. I should point out, however, that staff believes that the report largely confirms Federal Reserve staff analysis.

Thank you for providing the Board with an opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "E. T. Mulrenin".

Edward T. Mulrenin
Assistant Staff Director

cc: C. Doying
F. Dziadek
S. Swaim
H. Terrell
L. Wells

(483377)

Request for copies of GAO reports should be sent to:

U.S. General Accounting Office
Document Handling and Information
Services Facility
P.O. Box 6015
Gaithersburg, Md. 20760

Telephone (202) 275-6241

The first five copies of individual reports are free of charge. Additional copies of bound audit reports are \$3.25 each. Additional copies of unbound report (i.e., letter reports) and most other publications are \$1.00 each. There will be a 25% discount on all orders for 100 or more copies mailed to a single address. Sales orders must be prepaid on a cash, check, or money order basis. Check should be made out to the "Superintendent of Documents".

